

Rural-to-Urban Migrants' Self-Rated Health in China: An Empirical Evaluation of the  
Effects of Access to Health Insurance and Working/Living Conditions

Zhen Li

State University of New York at Albany

Email: [zl231656@gmail.com](mailto:zl231656@gmail.com)

## Abstract

Taking advantage of a unique dataset containing rich information on rural-to-urban migrants in China, I examined the relationship between rural migrant workers' self-rated health and access to health insurance, and that between their self-rated health and working/living conditions. The hypotheses of this article have been confirmed that working hours per week is negatively related with rural migrants' self-reported health status, inferior living conditions are related with increased risk of reporting less than good health, and that having no access to health insurance is also negatively related with their subjective evaluation of their health. Also interesting is the finding that as compared with rural migrants in the Pearl River Delta area, those working in the Yangtze River Delta enjoy better health.

## **Introduction**

Reports in the mass media of rural migrants who are inflicted with illnesses of devastating consequences or that they cannot afford to be treated adequately have been around for a while. This is not just speculation or exaggeration by the reporters to increase readership. Though really extreme cases are concentrated in particular industries, such as mining and construction, the working and living conditions of rural migrants workers are in general inferior and can pose great risks for their health status (Li and Li, 2007; Hesketh, Ye, Li and Wang, 2008; Zhu, 2009).

Rural migrants' health issue is another manifestation of their inferior status in cities caused by the institutional legacy of hukou system and thus has great implications for social justice. Compared with urban residents, rural migrants are less likely to have access to health insurance and more likely to work and live in less than pleasant conditions (Wang, Zuo and Ruan, 2002; Li and Li, 2007). Moreover, the health status of rural migrants is also an issue of immediate substantive importance in that bad health of this massive floating population will have negative impact on either the destination communities or the origin communities.

In the literature on Chinese rural migrants' health, researchers have examined topics such as the high risk of STDs among rural migrants, female rural migrants' reproductive health, the negative impact of lack of access to health insurance on their health status, the health status of migrant children, and rural migrants' psychological well-being (Yang, 2004; Wang, 2005; Liang, Guo, and Duan, 2008; He et al. 2010). This paper is part of these efforts devoted to understanding the health status of rural-to-urban migrants. More

specifically, this paper endeavors to demonstrate empirically the relationship between, on the one hand, the health status of rural migrants, and on the other, access to health insurance and their working/living conditions.

By taking advantage of a dataset collected in the two largest migration destinations in China—the Pearl River Delta and the Yangtze River Delta, I will first describe the health status of rural migrants as measured by self-rated health. Then, using the rich information contained in this dataset, I will present the results of a series of logistic regression models to examine the proposed relationship between self-rated health and access to health insurance and working/living conditions. Besides the key explanatory variables, I am able to bring several variables that could confound the relationship between self-reported health status and access to health insurance and working/living conditions under control, such as prior experience with occupational injury and medical check-up. Another potential contribution of this study to the literature is that I can examine whether the health status of rural migrants differs between those working in the Pearl River Delta and those working in the Yangtze River Delta, two areas that are said to be different for working and living experience of rural migrants.

### **Theoretical Background and Literature Review**

In recent years, health researchers have joined forces in migration studies to link migration with health (Landale and Oropesa 2001; Akresh and Fran 2008; Jasso, Massey, Rosenzweig and Smith 2005; Wang, Ping, Zhan and Shen 2005; Jatrana, Toyota and Yeoh 2005; Liang, Guo and Duan 2008). In the case of rural-to-urban migrants in China, it is found that the health status of rural migrants is vulnerable, that their reluctance to

seek medical help results largely from inadequate access to health insurance, and that the inferior working and living conditions are contributing factors to bad health (Yang, 2004; Wang, 2005; Xiang, 2005; Li and Li, 2007; Liang, Guo, and Duan, 2008; Zhu, 2009).

The major focus of this article is the relationship between self-rated health and access to health insurance and their working/living conditions in destination cities.

### **Health Insurance**

Unlike the U.S. where employers buy commercial health insurance for their employees, in China, employees join so-called social health insurance program, in which the local government, the employer and the employee collectively pay for the insurance plan.

However, due to their hukou status, rural migrants do not have adequate access to such health insurance in China as compared with their urban counterparts (Wang, Zuo and Ruan, 2002; Li and Li, 2007). One of the fundamental reasons proposed to explain this situation is that Chinese government allocates resources to local health sectors based on the population size of registered urban residents in each jurisdiction, and thus local governments lack the initiative to include rural migrants in this system (Xiang, 2005).

Moreover, a functional medical system in rural areas has not yet fully in place (Xiang, 2005). Thus, it is not uncommon for a rural migrant to not have health insurance in neither the origin nor the destination place, which, in combination of the relatively high cost of health care in China's recently commercialized health sector and rural migrants' low income level, makes utilization of health care specially problematic for this group.

Furthermore, it is also argued that even if companies offer to provide health insurance, some rural migrants may be reluctant to participate (Nielsen et al., 2005; Hesketh, Ye, Li

and Wang, 2008). Some might find the self-payment part of the insurance plan is still expensive. Moreover, since the public health insurance program was designed at a time of low labor mobility, it is hard for rural migrants to take the health insurance account with them when they have a new job in another city. Also, other reasons why some migrants do not have access to health insurance include their ignorance of the idea of health insurance and their imperative to earn as much money as possible and the resultant unwillingness to spend money on health care.

As can be seen, the general argument is that health insurance is not working for rural migrants. But an empirical examination of the extent to which health insurance can help or cannot help protect rural migrants is still lacking. The fact that a health insurance system is not in place for rural migrants should not deter us from examining its potential effect on their health. If a positive relationship between health insurance access and health can be confirmed among them, we have even good reason to argue for their inclusion in the health insurance system.

In the general literature on the relationship between health and access to health insurance, it has been shown that a person's access to health insurance is at least associated with, if not leading to, one's health status (Franks et al., 1993; Ayanian et al., 1993). Studies show that an important reason why female rural migrants with reproductive disease do not seek medical help is that the monetary cost is too high (Wang, 2005). Moreover, I argue that health insurance access is especially important in examining rural migrants' health status. Rural-to-urban migrants tend to be relatively young and highly reliant on health as a human capital in order to work in the secondary labor market. Accordingly, there should be a selection on health among potential migrants. Once working in cities,

less than good health tends to result from the inferior working and living conditions. If treated properly and timely, the negative health consequences can be decreased at least.

Thus, it is hypothesized in this article that having access to health insurance at the place of destination is positively related with rural-to-urban migrants' self-rated health. Having access to health insurance at the place of origin does not relate to their health status at least because of the long distance involved.

### **Working/living Conditions**

Low-skilled rural-to-urban migrants usually work in the manufacturing sector, especially in the two areas under study in this article. The mushrooming of factories in the Pearl River Delta and the Yangtze River Delta can be traced to the opening-up policy of China in the late 1970s. Pro-investment policies and these two areas' geographical advantages attract many domestic and foreign investments, which resulted in the establishment of factories in these two areas, and helped promote China as the world factory. The demand for labor by these factories, aided by the relaxation of the hukou system, attracted a huge amount of former peasants into these areas. Among aspects of rural migrant workers' worse working conditions as compared with their urban counterparts, long working hour stands out as a basic feature (Li and Li, 2007; Hesketh, Ye, Li and Wang, 2008; Zhu, 2009). To the extent that working hour has been identified as an important factor on workers' health (Sparks et al., 1997; Liira et al., 1996), I will try to confirm empirical this negative association among rural migrants in this paper.

Due to their institutional status as rural hukou holders, rural migrants face harsh realities once they landed in cities besides the inferior working conditions as mentioned above. In

terms of housing, according to existing studies, rural migrants have several “options” in terms of housing. They either live in factory dormitories, in “urban villages” or city peripheries where migrants are concentrated, or rent or buy apartments in the same neighborhood where local urban residents live (Li, 2003; Bai and Li, 2008), and the last of these options is relatively rare among rural migrant workers as compared with other living arrangement. Dormitory living is more regulated than living in rented apartments (Ren and Pan, 2006), while living in “urban villages” suffers from many problems such as insanitariness and noise. Several studies have also documented the inadequate living conditions of rural-to-urban migrants in China (Wu and Wang, 2002; Hesketh, Ye, Li and Wang, 2008). For example, Wu and Wang (2002) found that compared with urban residents, migrants tend to live in crowded and low-quality apartments in an examination of rural migrant workers in two of the biggest cities in China—Beijing and Shanghai. However, the health implications of these two types of living and housing qualities remain unclear and this article aims to look into this issue empirically.

## **Data, Measures and Method**

### **Data**

Data was collected as part of a large project—“Research on Theories and Practices of Protecting Rural-to-Urban migrants’ Rights and Benefits”\*. The surveys were conducted from July to August in 2010 in the Pearl River Delta and the Yangtze River Delta of China. Respondents of the survey are defined as inter-county migrants in these two areas,

---

\*The project is supported by a grant from the Education Department of China (09JZD0032).

and have an education level of dazhuan (3-year college) or less. Since the major focus of the project is rural-to-urban migrants, they are oversampled. 84.15% of the respondents are rural hukou holders and this subset of the sample will be used in the analysis of this paper.

Due to the fact that there is a lack of complete registration of this floating population in China, random sampling is out of the question. Instead, quota sampling is employed\*. Specifically, the number of people sampled in each city is proportional to the size of the migrant population in that each city. Respondents are also allocated gender and by the sectors of the economy in which migrants work in these cities. In order to access respondents, convenience and snowball sampling is used. The questionnaire was administered by face-to-face interview, in which the interviewers read questions to the respondents and take down their answers. Of those questionnaires that were collected 97.6% are valid and the final sample size is 4,152.

## **Measures**

### **Dependent Variable**

The dependent variable is self-rated health, which is measured as an ordinal variable on a scale ranging from very bad, bad, fine, good, to very good. Though subject to potential bias, self-rated health has been shown to be a very cheap but still reliable indicator of one's overall health (Moosey and Shapiro, 1982; Idler and Benyamini, 1997). In the multivariate analyses, I will treat self-rated health as a binary variable, with very bad and

---

\*Proportions used in sampling process are calculated from local census data.

bad as one category—“good health”, and fine, good and very good as the other category—“less than good health”. This categorization is common among users of self-rated health as a measure of health and has been justified by other researchers (Strully, 2009; Manor, Matthews and Power, 2000).

### **Key Explanatory Variables**

**Health Insurance:** In the questionnaire, the respondents are asked if the company they are currently working for provide them with several benefits, such as health insurance, occupational injury insurance and unemployment insurance. Of these items, the most relevant one to the purpose of this article is **health insurance** (1=yes; 0=no). “Health insurance” as appeared in the questionnaire does not distinguish between public health insurance, which is co-sponsored by the company, the local government and the worker, and commercial health insurance, which does not involve the financial support local government. This distinction among types of health insurance does weigh much in this article, since the focus is on the general effect of access to health insurance on rural migrants’ health, rather than on the potential differential effects of various types of health insurance, or on the selection of rural migrants into different types of health insurance.

**Working and Living Conditions:** Regarding measures of the **working hours per week**, the respondents were asked about how many days they have to work per week and how many hours they have to work per day, thus enabling me to calculate from this information the average working hour per week. The questionnaire asks if the current place of residence has the following amenities: hot shower, restroom, balcony, kitchen,

laundry room, television, fan, closet, drinking fountain, air conditioner, and refrigerator. From these questions, I can construct a variable measuring the **number of amenities** their housing units are equipped with to indicate living conditions. To measure the **type of housing** one is currently living in, there is a question in the survey asking the respondent to choose the type of housing from the following items: factory dormitory, rented apartment, living in the home of a relative or friend, living in the dormitory of a relative or friend, work-site, self-owned apartments, and others. I treat factory dormitory and rented apartment as two separate categories, and put all the other options to the category--other.

### **Control Variables**

**Area** is a dichotomous variable with 0 indicating the Pearl River Delta and 1 indicating the Yangtze River Delta. It is expected that controlling for other variables, rural migrants working in the Yangtze River Delta surpass their counterparts in the Pearl River Delta in terms of health status. The respondents are also asked if the company they are currently working for has provided them with **free medical check-up**. Whether or not having received medical check-up will influence how rural migrants rate their health status. Other control variables include whether or not the respondent has experienced any **occupational injury** in the past, **time elapsed since first job in cities**, **monthly income** and **socio-demographic characteristics**, such as age, education level and marital status.

### **Method**

In order to examine the relationship between health insurance access and self-rated health, and that between working hour and self-rated health, I will adopt the binary

logistic regression as the modeling method. The first model is the basic one including all the control variables in it. Then, I estimated three models with key explanatory variables in them respectively, including access to health insurance, working hours per week and the two indicators of living conditions. The final model will have access to health insurance, working hours and living conditions in it in order to access the relative importance of these two variables.

## **Findings**

### **Descriptive Results**

Descriptive statistics of the explanatory and control variables can be found in table 1. It is shown that 47.5% of all the respondents in the sample said they have access to health insurance, 46.0% said they do not have access, and the rest are not sure about their health insurance status. We can also learn from the table that rural migrant worker in the sample work an average of 57.11 hours per week. With regard to their living conditions, they have around 6 amenities, such as hot shower, kitchen, in their current dwelling. 36.75% of the respondents live in dormitories provided by the company.

As for the control variables, the average age of the respondents in the sample is 31.35. 45.92% are females. 42.3% of them are not married till the date of the survey. 17.69% of the respondents in the sample have an education level of primary school or less, 47.47% have finished junior high school and the rest have an education level of senior higher school or more. As compared with their unusually low income in the past, in 2010, they make an average of 1904.3 yuan on a monthly basis. 47.32% of the sample respondents work in the Pearl River Delta, while the rest work in the Yangtze River Delta. As for

whether the respondents have participated in the new rural cooperative health insurance program, 62.03% said they have, 26.64% said no, and 10.57% of the respondents did not know about this. 10.81% of the respondents said they had occupational injury in the past. 30.97% said the company they are currently working for has provided free medical check-up for them.

Turning to the dependent variable, as can be seen in Figure 1, 6.9% of the respondents said their health is very poor, 4.79% said their health is poor. 31.35%, 39.91% and 23.27% of the respondents respectively reported their health status as being fair, good and very good. To tap the relationship between self-rated health and access to health insurance and that between self-rated health and working/living conditions, I did a cross-tabulation analysis of these three sets of variables and the dependent variable. It is shown in table 2 that descriptively, those who have health insurance are less likely to report that they have poor or very poor health and more likely to report that they have good or very good health than those who do not have access to health insurance. However, more people who do not have access to health insurance (34.84%) reported their health status as being fair than people who have access (27.63%). With regard to the descriptive relationship between health status and working hours per week, it seems that those who work longer hours tend to report that they have poorer health. Also, those who have more amenities in their housing unit report better health than those who do not. Those who live in dormitories are more likely to report poor health and less likely to report good health. Thus, it seems that the relationship between self-rated health and the three sets of explanatory variables holds up in descriptive statistics.

### **Results of Logistic Regression Analyses**

The results of logistic regression analyses are presented in table 3. Model 1 is the basic model with only the control variables in it. It can be learned from the results that age, education level, marital status, time elapsed since the first job in cities, health-insurance status at hometown, and number of friends are not significantly related with respondents' health status. However, being a male increases the odds of reporting good health by 55%. The higher the respondents' monthly income, the more likely they will report having good health.

As for the two control variables that are included in the models to control for pre-existing conditions and reporting bias, both show a statistically significant effect. The odds of reporting good health are 77% higher for those who have not had occupational injury in the past than for those who have. Receiving free medical check-up offered by the current company will increase the risk of reporting bad health. Another interesting finding is concerned with the area variable. Working in the Pearl River Delta decreases the odds of reporting good health for rural-to-urban migrants by 39% as compared with working in the Yangtze River Delta. These effects of the control variables stay the same across models.

In model 2, I added access to health insurance to the basic model and results show that having no health insurance decreases the odds of reporting good health by 25%. In model 3, I added working hours to the basic model and consistent with my hypothesis, it shows a statistically significant effect. Specifically, for every one increase in working hours per week, the odds of reporting good health will be decreased by 1%.

The effects of living conditions can be seen in model 4. Results show that living conditions are significantly related with respondents' self-rated health. As compared with those living in dormitories provided by companies, the risk of reporting good health for those living in rented apartments is 21% less. The increase of one amenity in the housing unit increases the odds of reporting good health by 8%.

Their respective effects did not disappear when I bring these three sets of explanatory variables in the same model (model 5). Thus, my major hypotheses concerning the relationship between self-rated health and access to health insurance, that between self-rated health and working hours and that between self-rated health and living conditions are confirmed by the results of the models.

### **Discussions and Conclusions**

The health status of Chinese rural migrants remains a somewhat understudied area and an understanding of it has both theoretical and practical implications. Theoretically, studying the health issues of Chinese rural migrants can shed light on the broad issue of migration and health. On the other hand, the health issue of rural migrants has practical implications in that their health status can pose challenges for the health care system and public health in destination places and once returned, can influence the health of the rural population as a whole and would put demand on the rural health care system.

In this article, I examined the health status of rural-to-urban migrants in two of the largest migration destinations in China in relation with three sets of factors that I identified as important to rural migrants' health status in cities: access to health insurance, working conditions and living conditions. I used a unique dataset that was collected in these two

areas to examine these issues. My hypotheses have been confirmed by the results that access to health insurance, better working and living conditions are related with better self-reported health.

It is found that having access to health insurance can significantly increase the risk of reporting good health. Longer working hours per week is associated with an increased risk of reporting less than good health. Having more amenities in one's housing unit or living in factory dormitories as compared with living in rented apartments can also increase the likelihood of reporting good health. The mere fact that all three sets of explanatory variables show an effect points to the fact that the health status of rural migrants is a complicated issue.

It can be seen easily that all these three factors are closely related with rural migrant workers' position in cities. Health insurance should be a basic employment benefit for every employee under the Chinese law. However, whether or not an employee can actually have access to it still depends on their institutional status in cities. On the one hand, local governments are reluctant to include them in the urban health care system since medical resources are allocated based on the registered population size. On the other hand, propelled by a desire to develop economically and retain their attraction to capital, local governments usually turn a blind eye to violation of rural migrants' benefits on the companies' part. In this "pro-business" climate and driven to take advantage of China's cheap labor, companies are reluctant to sign labor contracts with rural migrants and are unwilling to provide enough benefits to them. In recent years, the reform of the health care system has been under way. And their situation has been said to be better

especially under the so-called “labor shortage”. However, the extent of improvement and its actual effect awaits empirical examination.

The issue is far more complicated than the above arguments have claimed. Another complication is that even if companies offer to provide health insurance for rural migrants, they may not accept this offer out of practical considerations, such as maximizing their income and the non-transferability of current health insurance across regions. To the extent that this article finds a statistically significant relationship between access to health insurance and self-reported health status, more efforts should be directed at removing the barriers against rural migrants’ access to health insurance.

Living and working conditions are also related with their institutional status in cities. Working overtime is part of parcel of rural migrants’ work. Rural migrants might even volunteer to work extra time in order to maximize one’s income. Zhu (2009) argued that the major reason behind this is the government’s failure to regulate working hours for rural migrants and its ignorance for rural migrants’ welfare out of considerations for local economic development. For companies in the manufacturing sector, they have to “exploit” those rural migrants in order to compete in the market.

Rural migrants usually live in less than satisfactory living conditions. It is found that compared with living in rented apartments, living in factory dormitories is related with reporting good health. And having more amenities in the housing will also increase the risk of reporting good health. Though factory dormitories are said to be a form of arrangement that tries to make the most out of the labor of rural migrants, the results of this article suggest that living in factory dormitories is associated with better health than

living in rented dwellings, which are usually located in places with a high concentration of rural migrants and are usually characterized by inferior housing conditions, such as crowdedness, noise and insanitariness.

Despite these findings, in future studies of the health status of rural migration, the following issues should be taken into account. First of all, the conclusions made so far are just statements about the association between rural migrants' self-rated health on the one hand and access to health insurance, working and living conditions on the other hand. The most insightful and meaningful research on rural migrants' health should concern itself with revealing causal relationships. One of the problems that keep me from reaching causal conclusions is the non-random selection of rural migrants into access to health insurance. Other related issues include the lack of control for pre-existing medical conditions except for the prior experiences of occupational injuries. Second, though this article found a consistently significant difference in self-reported health status between rural migrants in the Pearl River Delta and those in the Yangtze River Delta, the mechanisms behind this difference are left unanswered. Thirdly, this article misses an important part of rural migrants, those that are self-employed. Being not affiliated with any formal organization, joining public health insurance program is impossible for them and buying commercial health insurance is not an option for most of them. So any study of rural migrants' health should not neglect self-employed rural migrants and an understanding of their health-related issues is in urgent need.

Table 1: Descriptive Statistics for variables used in the analysis of rural-to-urban migrants' self-rated health

Variables	Continuous Mean (S.D)	Discrete Percentage (%)
<i>Control Variables</i>		
Age	31.35(9.64)	--
Monthly Income (Yuan)	1904.33(937.66)	--
Duration (year)	8.77(6.45)	
Number of friends	6.44(11.37)	--
<i>Gender</i>		
Female	--	45.92
Male		54.08
<i>Education</i>		
Primary School or less		17.69
Junior High School	--	47.47
Senior High School or more		34.84
<i>Marital Status</i>		
Not Married	--	42.30
Married		57.70
<i>Free Medical Examination</i>		
Yes	--	30.97
No		69.03
<i>Whether or not have work-related injury</i>		
Yes	--	10.81
No		89.19
<i>Area</i>		
Yangtze River Delta	--	47.32

Pearl River Delta		52.68
<i>Whether or not have health insurance at the place of origin</i>		
Yes		62.03
No	--	26.64
Not Sure		10.57
Not Applicable		0.76
<hr/>		
Explanatory Variables		
<hr/>		
<i>Whether or not have Health Insurance</i>		
Yes		47.50
No	--	46.07
Not Sure		6.43
Weekly Working Hour	57.11(15.29)	
Number of amenities in a housing unit	5.97(2.49)	
<i>Housing type</i>		
Dormitories		36.75
Rented Apartment		54.63
Other		8.62
<hr/>		
N	3,284	
<hr/>		

Figure 1: Frequencies of Chinese Rural-to-Urban Migrants' Self-Rated Health (N=3294)

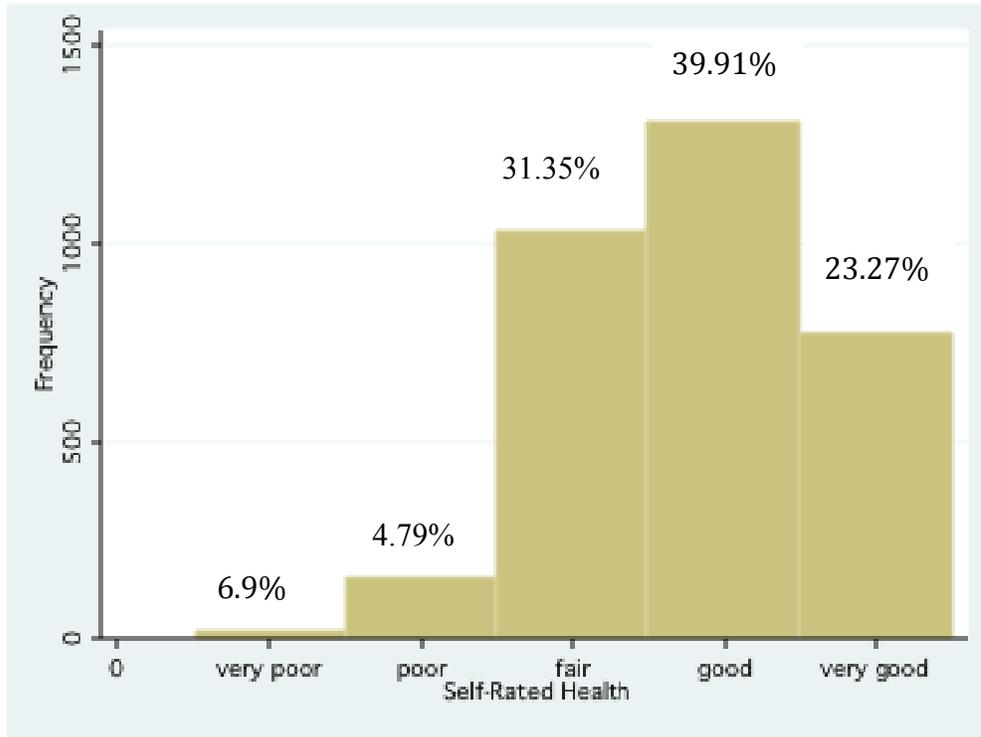


Table 2: Cross-tabulation of self-rated health by access to health insurance and working/living conditions (N=3284)

Health	Health Insurance			Housing Type			Number of Amenities	Working Hours per Week
	Yes	No	Not Sure	Factory Dormitories	Rented Apartments	Other Types		
Very Poor	0.64%	0.73%	0.47%	0.33%	0.89%	0.71%	5.64	57.45
Poor	4.10%	5.22%	6.64%	4.47%	5.30%	2.83%	5.37	61.49
Fair	27.50%	35.03%	32.70%	29.41%	32.89%	29.33%	5.64	58.60
Good	42.31%	37.14%	38.39%	40.02%	39.63%	38.52%	6.07	56.03
Very good	25.45%	21.88%	21.80%	25.77%	21.29%	28.62%	6.34	56.07

Table 3: Basic Model and Working Hour Model of Chinese Rural-to-Urban Migrants' Self-Rated Health: logistic Regression Analyses (odds ratio)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Age	0.95(.03)	.94(.03)	.94*(.03)	.96(.03)	.95(.03)
Age Square	1.00(.00)	1.00(.00)	1.00(.00)	1.00(.00)	1.00(.00)
Gender (ref.=Female)					
Male	1.55*** (0.8)	1.58***(.08)	1.57***(.08)	1.59***(.08)	1.62***(.08)
Education (ref.=Primary School or less)					
Junior High School	1.01(.11)	.97(.11)	.98(.11)	.98(.11)	.93(.11)
Senior High School or more	1.17(.12)	1.08(.12)	1.08(.12)	1.07(.12)	.95(.13)
Marital Status (ref.=Not Married)					
Married	.99(.12)	.99(.12)	.99(.12)	1.02(.12)	1.02(.12)
Monthly Income	1.00**(.00)	1.00*(.00)	1.00*(.00)	1.00*(.00)	1.00*(.00)
Duration	.99 (.01)	.99(.01)	.99(.01)	.99(.01)	0.99(.01)
Free Medical Examination (ref.=Yes)					
No	.74***(.08)	.80*(.09)	.77*(.08)	.81(.09)	.87(.09)
Whether or not have work-related injury (ref.=Yes)					
No	1.77***(.12)	1.79***(.12)	1.76***(.12)	1.72***(.12)	1.73***(.12)
Area (ref.=Pearl River Delta)					
Yangtze River Delta	.65***(.08)	.65***(.08)	.66***(.08)	0.61***(.08)	.62***(.08)
Number of friends	1.01(.00)	1.01(.00)	1.01(.00)	1.01(.00)	1.01(.00)
Whether or not have health insurance at the place of origin (ref.=yes)					
No	1.03(.09)	1.02(.09)	1.03(.09)	1.02(.09)	1.00(.09)

Not Sure	1.18(.13)	1.16(.13)	1.15(.13)	1.14(.13)	1.12(.13)
Not Applicable	0.63(.43)	.63(.43)	.59(.42)	.59(.42)	0.57(.42)
Whether or not have Health Insurance					
(ref.=yes)					
No	--	.75***(.08)	--	--	.82*(.08)
Not sure	--	.79(.16)	--	--	.81(.16)
Weekly Working Hour	--	--	.99***(.00)	--	.99***(.00)
Number of amenities in the housing unit	--	--	--	1.08***(.02)	1.07***(.02)
Housing Type (ref.=dormitories)					
Rented Apartment	--	--	--	.79**(.08)	.77**(.08)
Other	--	--	--	.82(.15)	.84(.15)
N	3284				

\*p<.05

\*\*p<.005

\*\*\*p<.001

## Reference

- Ayanian, John Z., Betsy A. Kohler, Toshi Abe, and Arnold M. Epstein. 1993. "The relation between health insurance coverage and clinical outcomes among women with breast cancer." *The New England Journal of Medicine*. 329 (5): 326-331.
- Akresh, Ilana Redstone and Reanne Frank. 2008. "Health Selection among New Immigrants." *American Journal of Public Health* 98:2058-2064.
- Bai, Nansheng and Jing Li. 2008. "Urbanization and Research on Chinese Rural Migrants." *Chinese Journal of Population Science*. 4.
- Franks, Peter, Carolyn M. Clancy, and Marthe R. Gold. 1993. "Health insurance and mortality: evidence from a national cohort." *The Journal of the American Medical Association*. Vol. 270 (6): 737-741.
- He, Xuesong, Fuqiang Huang, and Shouzhui Zeng. 2010. "Rural-urban migration and psychological wellbeing: an empirical researched based in Shanghai." *Sociological Studies*, 2010 (1).
- Idler, E.L. and Y. Benyamini, 1997. "Self-Rated Health and Mortality: A Review of Twenty-Seven Community Studies." *Journal of Health and Social Behavior* 38: 21-37.
- Jasso, Gullermina, Douglas S. Massey, Mark R. Rosenzweig, and James P. Smith. 2005. "Immigration, Health, and New York City: Early Results Based on the US New Immigrant Cohort of 2003." *FRBNY Economic Policy Review* December. 447-472.
- Liang, Zai, Lin Guo, Charles Chengrong Duan. 2008. "Migration and the Well being of children in China". *The Yale-China Health Journal* Vol. 5.

- Li, Peilin and Wei Li. 2007. "Economic Status and Social Attitudes of Rural Migrant Workers in China's Transition." *Sociological Studies* 3: 1-12.
- Li, Ruojian. 2003. "The Analysis of the Spatial Distribution of Migrants in Guangzhou." *Journal of Sun Yatsen University*. 43(3): 73-80.
- Liang, Zai, Lin Guo, Charles Chengrong Duan. 2008. "Migration and the Well being of children in China". *The Yale-China Health Journal* Vol. 5.
- Liira, Juha P., Harry S. Shannon, Larry W. Chambers and Theodore A. Haines. 1996. "Long-term back problems and physical work exposures in the 1990 Ontario Health Survey." *American Journal of Public Health* Vol. 86. No.3.
- Landale, Nancy S. and R.S. Oropesa. "Migration, social support and perinatal health: an origin-destination analysis of Puerto Rican women." *Journal of Health and Social Behavior* 42(2): 166-183.
- Moosey, J.M. and E. Shapiro, 1982. "Self-Rated Health: A Predictor of Mortality Among the Elderly." *American Journal of Epidemiology* 28: 95-100.
- Manor, Orly, Sharon Matthews and Chris Power. 2000. "Dichotomous or Categorical Response? Analyzing Self-rated Health and Lifetime Social Class." *International Journal of Epidemiology* 29: 149-157.
- Nielsen, Ingrid et al. 2005. "Which Rural Migrants Receive Social Insurance in Chinese Cities? Evidence from Jiangsu Survey Data." *Global Social Policy* 5(3): 353-381.
- Ren, Yan and Yi Pan. 2006. "The Space Politics of International Labor Process: Dormitory Labor Regime in the Globalization Era." *Sociological Studies*. 4: 21-33.

Strully, Kate W. 2009. "Job Loss and Health in the U.S. Labor Market." *Demography* 46 (2): 221-246.

Sparks, Kate, Cary Cooper, Yitzhak Fried and Arie Shirom. 1997. "The effects of hours of work on health: a meta-analytic review." *Journal of Occupational and Organizational Psychology* 70: 391-408.

Santosh Jatrana, Mike Tyoyota, and Breanda S.A. Yeoh (eds.). 2005. *Migration and Health in Asia*. London, Routledge.

Wang, Feng, Xuejin Zuo and Danching Ruan. 2002. "Rural Migrants in Shanghai: Living under the Shadow of Socialism." *International Migration Review* 36(2): 520-545.

Wu, Weiping and Hansheng Wang. 2002. "Living in Metropolitan Cities: the Analysis of the Housing Conditions of Rural Migrants in Beijing and Shanghai." *Sociological Studies*. 3: 92-110.

Wang, Feng. 2005. "Reproductive health status, knowledge, and access to health care among female migrants in Shanghai, China." *Journal of Biosocial Sciences* 37:603-622

Xiang, Biao. 2005. "An institutional approach toward migration and health in China." In Jatrana, Santosh , Mike Tyoyota, and Breanda S.A. Yeoh (eds.) *Migration and Health in Asia*. London, Routledge.

Yang, Xiushi. 2004. "Temporary Migration and the Spread of STDs/HIV in China: Is there a Link?" *International Migration Review* Vol. 38: 212-23.

Yang, Xiushi. 2004. "Temporary Migration and the Spread of STDs/HIV in China: Is there a Link?" *International Migration Review* Vol. 38: 212-235.

Zhu, Ling. 2009. "Working Hours and the Occupational Health of Rural Migrant Workers." *Social Sciences in China* 1: 133-149.